

U.S. Patent Application Serial No. 10/553,240
Amendment filed June 29, 2009
Reply to OA dated January 28, 2009

AMENDMENT TO THE SPECIFICATION:

Please replace the paragraph beginning at page 10, line 5, with the following rewritten paragraph:

BRIEF DESCRIPTION OF THE DRAWING

[[Fig. 1]] The sole Figure is a graph showing reflection profiles of conductive silver films according to Examples 4 and 5 of the present invention and a conductive silver film according to Comparative Example 2.

Please replace the paragraph beginning at page 10, line 14, with the following rewritten paragraph:

In the outset, as processes for producing fine silver particles colloidal dispersions, some processes are already known in the art, among which the [[Carey-Lee]] Carey-Lea process (see Am. J. Sci., 37, 47, 1889, and Am. J. Sci., 38, 1889) are commonly in wide use because of its advantages that fine silver particles can have small particle diameter and colloidal dispersions having a relatively high concentration can be obtained with ease.

Please replace the paragraph bridging pages 10 and 11 (line 23, page 10 through line 10, page 11), with the following rewritten paragraph:

According to this [[Carey-Lee]] Carey-Lea process, an aqueous silver nitrate solution is mixed in a mixed solution of an aqueous iron(II) sulfate solution and an aqueous sodium citrate solution to allow them to react, the resultant agglomerate of fine silver particles are filtered and washed, and thereafter pure water is added to the resultant cake of the agglomerate of fine silver particles, whereby a fine silver particle colloidal dispersion can be obtained. The fine silver particle colloidal dispersion obtained by this Carey-Lee process has a fine silver particle concentration of from 0.1 to 10% by weight. If it has a concentration of more than 10% by weight, it tends to agglomerate.

Please replace the paragraph bridging pages 22 and 23 (line 16, page 22 through line 19, page 23), with the following rewritten paragraph:

As the organic solvent, it is preferable to use an organic solvent containing at least dimethyl sulfoxide. This is because the dimethyl sulfoxide acts on the fine silver particles to have the effect of improving the stability of the fine silver particle colloidal dispersion. In the fine silver particle colloidal dispersion of a water-organic solvent system according to the present invention, the fact that the dimethyl sulfoxide has the effect of improving the stability of the fine silver particle colloidal dispersion has been found by the fact that a conductive silver film formed using the fine silver

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particle colloidal dispersion of a water-organic solvent system to which dispersion the dimethyl sulfoxide has been added shows a high visible-light reflectance. [[Fig. 1]] The figure shows the reflectance of a conductive silver film (with addition of the dimethyl sulfoxide) of Example 4 according to the present invention and that of a conductive silver film (with addition of no dimethyl sulfoxide) according to Comparative Example 2. The present inventors consider that the conductive silver film obtained using the fine silver particle colloidal dispersion of a water-organic solvent system to which dispersion the dimethyl sulfoxide has been added has accomplished the closest packing (close-packed structure) to come improved in the visible-light reflectance, because the fine silver particles have been stabilized and any agglomerates have been made not to easily come about in the step of drying the wet coating formed.